**Yr 8 - Acid and Base Indicators**

**Part A**

**Aim: To explore Various Acid Base Indicators**

**Materials**

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| **Indicators:**  Phenolphthalein  Methyl Red  Universal Indicator | Blue Litmus Paper  Red Litmus Paper  Methyl Orange | **Acids & Bases:**  Vinegar  Ammonia  Distilled Water | **Equipment**  Droppers  Test tubes (10) |

**Method**

1. Add approximately 5 drops of vinegar to 5 test tubes
2. Add 1-2 drops of Phenolphthalein to one of the vinegar test tube and record your observation
3. Continue to add 1-2 drops of the other indicators to the vinegar and record your observations
4. Dip the litmus paper into the vinegar and record your observations
5. Add approximately 5 drops of ammonia to 5 test tubes
6. Repeat 2-4 for the ammonia test tubes
7. Add approximately 5 drops of distilled water to 5 test tubes
8. Repeat 2-4 for the ammonia test tubes

**Part B**

**Aim: To explore Various Acids and Bases**

**Materials**

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| **Indicators:**  Phenolphthalein  Methyl Orange | **Acids & Bases:**  Vinegar  Ammonia  Coca cola Lemon Juice | Distilled Water  Baking Soda  Tap Water | **Equipment**  Droppers  Test tubes (14) |

**Method**

1. Add approximately 5 drops of each of the acids or bases to the test tubes
2. Add 1-2 drops of Phenolphthalein each of the tubes and record your observations
3. Add approximately 5 drops of each of the acids or bases to the remaining test tubes
4. Add 1-2 drops of Methyl Orange each of the tubes and record your observations

**Part C**

**Aim: Determine the pH of various Unknown Substances**

**Materials**

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| **Indicator:**  Universal Indicator | **Unknown:**  4 unknown liquids | **Equipment**  Test tubes (4) |

**Method**

1. Add approximately 5 drops of each of the unknowns to the test tubes
2. Add 1-2 drops of indicator to each and determine the pH of each unknown
3. Use the indicator card to determine the pH